What Is Claimed:

1. An electrical machine comprising:

a stator core having slots;

a set of windings disposed within said slots, said set of windings having 2N+1 phases where N is an integer greater than 1.

2. An electrical machine as recited in claim 1 wherein said set of windings is coupled to a common node.

3. An electrical machine as recited in claim 1 wherein said set of windings is coupled polygonally.

4. An electrical machine as recited in claim 1 further comprising a switching circuit coupled to said set of windings, said switching circuit comprising at least 2(2N+1) switching elements.

5. An electrical machine as recited in claim 4 further comprising a full wave rectifier.

6. An electrical machine as recited in claim 1 wherein N=2.

7. An electrical machine as recited in claim 1 wherein N=3.

8. An electrical machine as recited in claim 1 wherein said electrical machine comprises a generator.

9. An electrical machine as recited in claim 1 wherein said set of windings has a full pitch.

10. An electrical machine as recited in claim 1 wherein said set of windings has a fractional pitch.

11. An alternator for an automotive vehicle comprising:

a housing;

a rotor rotatably disposed within said housing;

a stator core disposed within said housing adjacent to said rotor, said stator core having slots; and

a set of windings disposed within said slots, said set of windings having 2N+1 phases where N is an integer greater than 1.

12. An alternator as recited in claim 11 further comprising a full wave rectifier.

13. An alternator as recited in claim 11 wherein said set of windings is coupled to a common node.

14. An alternator as recited in claim 11 wherein said set of windings is coupled schematically in a polygon.

15. An alternator as recited in claim 14 wherein said polygon has 2N+1 sides.

16. An alternator as recited in claim 11 further comprising a rectifier circuit coupled to said first set of windings, said rectifier circuit comprising at least 2(2N+1) rectifying elements.

17. An alternator as recited in claim 11 wherein N=2.

18. An alternator as recited in claim 11 wherein N=3.

19. An alternator for an automotive vehicle comprising:

a housing;

a rotor rotatably disposed within said housing;

a stator core disposed within said housing adjacent to said rotor, said stator core having slots;

a set of windings disposed within said slots, said set of windings having 2N+1 phases where N is an integer greater than 1; and

a full wave rectifier circuit coupled to said set of windings, said rectifier circuit comprising at least 2(2N+1) rectifying elements.

20. An alternator as recited in claim 19 wherein said set of windings is coupled to a common node.

21. An alternator as recited in claim 19 wherein said set of windings is coupled schematically in a polygon.